

REMARKS

After entry of this Amendment, the pending claims are: claims 1-20. The Office Action dated June 19, 2007 has been carefully considered. Claims 1, 11 and 19 have been amended. No new matter has been added. Reconsideration and allowance of the present application in view of the above Amendments and the following Remarks is respectfully requested.

In the Office Action dated June 19, 2007, the Examiner:

- rejected claims 1-9 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,755,829 to Bono *et al.* (“Bono”) in view of U.S. Patent No. 5,989,254 to Katz (“Katz”);
- rejected claims 1-8 and 10 under 35 U.S.C. 103(a) as being unpatentable over Bono in view of U.S. Patent No. 6,090,111 to Nichols (“Nichols”);
- rejected claims 11-15 and 18 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,402,752 B2 to Schäffler-Wachter *et al.* (“Schäffler-Wachter”);
- rejected claims 16 and 17 under 35 U.S.C. 103(a) as being unpatentable over Schäffler-Wachter in view of Katz; and
- rejected claims 19 and 20 under 35 U.S.C. 102(e) as being anticipated by Schäffler-Wachter.

INDEPENDENT CLAIM 1

Independent claim 1 has been rejected as being unpatentable over Bono in view of Katz. In addition, independent claim 1 has been rejected as being unpatentable over Bono in view of Nichols. As an initial matter, it is respectfully submitted that the Examiner has not identified any reason why a

person of ordinary skill in the art would combine Bono with either Katz or Nichols other than it would teach all of the elements of independent claim 1. (*See KSR Int'l Co. v. Teleflex, Inc.*, 127 S.Ct. 1727, at 1741 (2007) “[a] patent composed of several elements is not proved obvious merely by demonstrating that each element was, independently known, in the prior art … important to identify a reason that would have prompted a person of ordinary skill in the art to combine the elements as the new invention does.”) It is respectfully submitted that the Applicants through their own effort and expense derived the device as claimed in independent claim 1. It is respectfully submitted that without the benefit of the Applicants’ disclosure, it would not be obvious for one of ordinary skill in the art to redesign the anchor assembly disclosed in Bono to incorporate, *inter alia*, securing means to prevent the bone fixation means from passing through the cavity prior to attachment of the sealing cap to the connection element.

Nonetheless, even assuming that the Examiner’s combination of Bono and Katz is correct, which in our opinion it clearly is not, the combination still would not disclose, teach or suggest all of the limitations of independent claim 1. As amended, independent claim 1 requires, *inter alia*, that the external surface of the connection element and the internal surface of the second cavity formed in the sealing cap include complementary arresting means for securing the sealing cap to the connection element, wherein the complementary arresting means includes complementary non-threaded projections and recesses for securing the sealing cap to the connection element, the projections and recesses providing a plurality of discrete axial latch positions parallel to the central axis, each successive latch position axially displacing the sealing cap over the connection element.

Bono discloses an anchor assembly including an anchor screw 31 and a closure cap 40, the closure cap 40 including a body 41 having a pair of dependent side members 43a, 43b on opposed sides thereof. Each of the side members 43a, 43b carries inwardly directed protrusions 46a- 46d, which are spaced apart and positioned to correspond to segmented flange members 36a-36d formed on the head of the screw 31. The protrusions 46a-46d are designed to pass down through the gaps between the segmented flange members 36a-36d, so that the cap 40 may be secured to the anchor screw 31 after being partially rotated.

Katz discloses a pedicle screw assembly including a connection member 6 and a cap 9, wherein the cap 9 is threadably engageable to the connection member 6.

It is respectfully submitted that neither Bono or Katz discloses, teaches or suggests that the external surface of the connection element and the internal surface of the second cavity formed in the sealing cap include complementary arresting means for securing the sealing cap to the connection element, wherein the complementary arresting means includes complementary non-threaded projections and recesses for securing the sealing cap to the connection element, the projections and recesses providing a plurality of discrete axial latch positions parallel to the central axis, each successive latch position axially displacing the sealing cap over the connection element. Rather, Bono discloses a cam lock type system wherein the corresponding projections and recesses formed on the anchor screw 31 and closure cap 40 are joined together at a discrete location by partial turning of the cap 40. Moreover, it is respectfully submitted that Katz, which was cited for disclosing a securing means comprising a pin and hole configuration, would not overcome the shortcomings of Bono.

Therefore, for at least the reasons identified above, it is respectfully submitted that Bono, either alone or in combination with Katz, does not disclose, teach, or suggest all of the limitations of independent claim 1. Withdrawal of this rejection and allowance of independent claim 1 is respectfully requested.

Moreover, independent claim 1 has also been rejected as unpatentable over Bono in view of Nichols. Even assuming that the Examiner's combination of Bono and Nichols is correct, which in our opinion it clearly is not, the combination still would not disclose, teach or suggest all of the limitations of independent claim 1. As amended, independent claim 1 requires, *inter alia*, that the external surface of the connection element and the internal surface of the second cavity formed in the sealing cap include complementary arresting means for securing the sealing cap to the connection element, wherein the complementary arresting means includes complementary non-threaded projections and recesses for securing the sealing cap to the connection element, the projections and recesses providing a plurality of discrete axial latch positions parallel to the central axis, each successive latch position axially displacing the sealing cap over the connection element.

As previously stated, Bono discloses an anchor assembly including an anchor screw 31 and a closure cap 40, the closure cap 40 including a body 41 having a pair of dependent side members 43a, 43b on opposed sides thereof. Each of the side members 43a, 43b carries inwardly directed protrusions 46a- 46d, which are spaced apart and positioned to correspond to segmented flange members 36a-36d formed on the head of the screw. The protrusions 46a-46d are designed to pass down through the gaps

between the segmented flange members 36a-36d, so that the cap 40 may be secured after being partially rotated.

Nichols discloses a device for securing a spinal rod to a spine, the device including a fastener 14, a securing body 16 and a locking element 18, wherein the locking element 18 is sized and configured to linearly engage the securing body 16.

It is respectfully submitted that neither Bono or Nichols discloses, teaches or suggests that the external surface of the connection element and the internal surface of the second cavity formed in the sealing cap include complementary arresting means for securing the sealing cap to the connection element, wherein the complementary arresting means includes complementary non-threaded projections and recesses for securing the sealing cap to the connection element, the projections and recesses providing a plurality of discrete axial latch positions parallel to the central axis, each successive latch position axially displacing the sealing cap over the connection element. Rather, Bono discloses a cam lock type system wherein the corresponding projections and recesses formed on the anchor screw 31 and closure cap 40 are joined together at a discrete location by partial turning of the cap 40. Moreover, it is respectfully submitted that Nichols, which was cited for disclosing a securing means including a snap-ring and groove configuration, would not overcome the shortcomings of Bono.

Therefore, for at least the reasons identified above, it is respectfully submitted that Bono, either alone or in combination with Nichols, does not disclose, teach, or suggest all of the limitations of

independent claim 1. Withdrawal of this rejection and allowance of independent claim 1 is respectfully requested.

Furthermore, as claims 2-10 all depend from independent claim 1, it is submitted that these claims are equally allowable. Withdrawal of these rejections and allowance of claims 2-10 is also respectfully requested.

INDEPENDENT CLAIM 11

Independent claim 11 has been rejected as being unpatentable over Schäffler-Wachter. As amended, independent claim 11 requires, *inter alia*, a connection element, the external surface of the connection element and the internal surface of a second cavity formed in the sealing cap including complementary arresting means for securing the sealing cap to the connection element, wherein the complementary arresting means extends continuously, concentrically, and non-threadingly around the central axis on the connection element external surface and the sealing cap internal surface, the concentric continuity of the arresting means interrupted by the first and second channels.

Schäffler-Wachter discloses a cap 5 with an inner part 6 and an outer part 7. The inner part 6 is designed to be snap-fitted over the head 4 of a bone screw 1. The inner part 6 further includes a recess 14 for receiving a spinal rod 2. The outer part 7 is U-shaped with a downwardly-open seat 16 to be placed over the rod 2. The arms 9 of the U-shaped outer part 7 have hook- or barb-like inner ends 10 that snap under inner edges of flat sides 11 of the inner part 6. In this fashion, the rod 2 may be secured

between the inner 6 and outer 7 parts. The outer part 7 further includes a slot 13 for engaging a ridge 12 formed on the inner part 6.

It is respectfully submitted that Schäffler-Wachter does not disclose, teach or suggest complementary arresting means that extend continuously, concentrically, and non-threadingly around the central axis on the connection element external surface and the sealing cap internal surface.

Furthermore, as claims 12-15 and 18 all depend from independent claim 1, it is submitted that these claims are equally allowable. Withdrawal of these rejections and allowance of claims 12-15 and 18 is also respectfully requested.

With respect to claims 16 and 17 which were rejected under 35 U.S.C. 103(a) as being unpatentable over Schäffler-Wachter in view of Katz, it is respectfully submitted that Katz does not overcome the shortcomings of Schäffler-Wachter. Katz was cited for the proposition that it would be obvious for one of ordinary skill in the art to incorporate a securing means including a pin and hole configuration. Without addressing the merits of this argument, it is respectfully submitted that, for at least the above-identified reason, neither Schäffler-Wachter or Katz, either along or in combination, disclose, teach or suggest all of the limitations of either dependent claim 16 or dependent claim 17. Thus, it is respectfully submitted that dependent claims 16 and 17 are allowable over the cited prior art. Withdrawal of these rejections and allowance of dependent claims 16 and 17 is respectfully requested.

INDEPENDENT CLAIM 19

Independent claim 19 has been rejected as being anticipated by Schäffler-Wachter. As amended, independent claim 19 requires, *inter alia*, a connection element, and a sealing cap, the external surface of the connection element having a plurality of bulges formed thereon, the internal surface of a second cavity formed in the sealing cap having a plurality of depressions formed therein, wherein the bulges and depressions extend continuously, concentrically, and non-threadingly around the central axis on the connection element external surface and the sealing cap internal surface, the concentric continuity of the bulges and depressions interrupted by the first and second channels.

As discussed in similar fashion above in connection with independent claim 11, it is respectfully submitted that Schäffler-Wachter does not disclose, teach or suggest a plurality of bulges and a plurality of depressions that extend continuously, concentrically, and non-threadingly around the central axis on the connection element external surface and the sealing cap internal surface.

Therefore, for at least the reasons identified above, it is respectfully submitted that Schäffler-Wachter does not disclose, teach, or suggest all of the limitations of independent claim 19. Withdrawal of this rejection and allowance of independent claim 19 is respectfully requested.

Furthermore, as claim 20 depends from independent claim 19, it is submitted that this claim is equally allowable. Withdrawal of this rejection and allowance of claim 20 is also respectfully requested.

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CONCLUSION

A fee of \$790.00 is believed due with this submission. The Commissioner is authorized to charge this and any other fee which may now or hereafter be due in this application to Deposit Account No. 19-4709.

In the event that there are any questions, or should additional information be required, please contact Applicants' attorney at the number listed below.

Respectfully submitted,

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